

Application No.: 10/007,674
Amendment under 37 CFR 1.111
Reply to Office Action dated November 7, 2005
February 7, 2006

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently amended): An active noise control system comprising:

a noise detector which detects a noise within a duct;

an error detector which is provided in a downstream side of the noise propagating within said duct for said noise detector to detect noise within said duct;

a control sound source which is installed in the vicinity of said error detector to radiate a control sound having approximately the same sound pressure as of and an opposite phase to the noise within said duct;

an arithmetic circuit which inputs an noise signal of said noise detector and an error signal of said error detector, sets a transfer function so that the error signal of said error detector becomes small, multiplies the noise signal of said noise detector with said transfer function, and outputs an multiplied result to said control sound source as a control signal; and

a rectifying part which is provided in an upstream side of a fluid flowing within said duct for said noise detector and said error detector, and increases a coherence of the fluid between

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said noise detector and said error detector by rectifying the fluid within said duct,

wherein said rectifying part includes:

at least one first rectifying net;

a rectifying grid having an opening ratio greater than that of said first rectifying net, and said rectifying grid placed in said duct downstream of and spaced from said first rectifying net; and

at least one second rectifying net having an opening ratio smaller than that of said rectifying grid, and said second rectifying net placed in said duct downstream of and spaced from said rectifying grid.

Claims 2-4 (Canceled)

Claim 5 (Withdrawn): An active noise control system comprising:

a plurality of noise detectors which are provided in a condition of being proximate to each other to detect noise within a duct;

a plurality of error detectors which are provided in a condition of being proximate to each other in a downstream side

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of the noise propagating within said duct for said noise detector;

a first adder which adds noise signals of said noise detectors;

a second adder which adds error signals of said error detectors;

a control sound source which is installed in the vicinity of said error detectors to radiate a control sound having approximately the same sound pressure as of and an opposite phase to the noise within said duct; and

an arithmetic circuit which inputs an output signal of said first adder and an output signal of said second adder, sets a transfer function so that the output signal of said second adder becomes small, multiplies the output signal of said first adder with said transfer function, and outputs a multiplied result to said control sound source as a control signal.

Claim 6 (Withdrawn): An active noise control system comprising:

a noise detector which is provided to each other to detect noise within a duct;

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a plurality of error detectors which are provided in a condition of being proximate to each other in a downstream side of the noise propagating within said duct for said noise detector;

an adder which adds error signals of said error detectors;

a control sound source which is installed in the vicinity of said error detectors to radiate a control sound having approximately the same sound pressure as of and an opposite phase to the noise within said duct; and

an arithmetic circuit which inputs an output signal of said noise detector and an output signal of said adder, sets a transfer function so that the output signal of said adder becomes small, multiplies the output signal of said noise detector with said transfer function, and outputs a multiplied result to said control sound source as a control signal.

Claim 7 (Withdrawn): An active noise control system comprising:

a plurality of noise detectors which are provided in a condition of being proximate to each other to detect noise within a duct;

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an error detector which is provided in a downstream side of the noise propagating within said duct for said noise detectors;

an adder which adds noise signals of said noise detectors;

a control sound source which is installed in the vicinity of said error detector to radiate a control sound having approximately the same sound pressure as of and an opposite phase to the noise within said duct; and

an arithmetic circuit which inputs an output signal of said adder and an output signal of said error detector, sets a transfer function so that the output signal of said error detector becomes small, multiplies the output signal of said adder with said transfer function, and outputs a multiplied result to said control sound source as a control signal.

Claim 8 (Withdrawn): An active noise control system according to claim 5, wherein said noise detectors are provided on a perpendicular plane to a propagating direction of a sound propagating within said duct.

Claim 9 (Withdrawn): An active noise control system according to claim 7, wherein said noise detectors are provided

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on a perpendicular plane to a propagating direction of a sound propagating within said duct.

Claim 10 (Withdrawn): An active noise control system according to claim 5, wherein said noise detectors are provided and an attachment position relating to the propagating direction of the sound within said duct is placed in an extent of approximately $1/4$ or less of a wavelength of the sound to be muffled.

Claim 11 (Withdrawn): An active noise control system according to claim 7, wherein said noise detectors are provided and an attachment position relating to the propagating direction of the sound within said duct is placed in an extent of approximately $1/4$ or less of a wavelength of the sound to be muffled.

Claim 12 (Withdrawn): An active noise control system according to claim 5, wherein said error detectors are provided on a perpendicular plane to a propagating direction of a sound propagating within said duct.

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Claim 13 (Withdrawn): An active noise control system according to claim 6, wherein said error detectors are provided on a perpendicular plane to a propagating direction of a sound propagating within said duct.

Claim 14 (Withdrawn): An active noise control system according to claim 5, wherein said error detectors are provided and an attachment position relating to the propagating direction of the sound within said duct is placed in an extent of approximately $1/4$ or less of a wavelength of the sound to be muffled.

Claim 15 (Withdrawn): An active noise control system according to claim 6, wherein said error detectors are provided and an attachment position relating to the propagating direction of the sound within said duct is placed in an extent of approximately $1/4$ or less of a wavelength of the sound to be muffled.

Claim 16 (Withdrawn): An active noise control system comprising:

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a plurality of noise detectors which are provided in a condition of being proximate to each other to detect noise within a duct;

a plurality of error detectors which are provided in a condition of being proximate to each other in a downstream side of the noise propagating within said duct for said noise detector;

a first adder which adds noise signals of said noise detectors;

a second adder which adds error signals of said error detectors;

a control sound source which is installed in the vicinity of said error detectors to radiate a control sound having approximately the same sound pressure as of and an opposite phase to the noise within said duct;

an arithmetic circuit which inputs an output signal of said first adder and an output signal of said second adder, sets a transfer function so that the output signal of said second adder becomes small, multiplies the output signal of said first adder with said transfer function, and outputs a multiplied result to said control sound source as a control signal; and

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a rectifying part provided in an upstream side of a fluid flowing within said duct for said noise detectors and said error detectors and increasing a coherence of the fluid between said noise detectors and said error detectors.

Claim 17 (Withdrawn): An active noise control system comprising:

a noise detector which is provided in a condition of being proximate to each other to detect noise within a duct;

a plurality of error detectors which are provided in a condition of being proximate to each other in a downstream side of the noise propagating within said duct for said noise detector;

an adder which adds error signals of said error detectors;

a control sound source which is installed in the vicinity of said error detectors to radiate a control sound having approximately the same sound pressure as of and an opposite phase to the noise within said duct;

an arithmetic circuit which inputs an output signal of said noise detector and an output signal of said adder, sets a transfer function so that the output signal of said adder becomes small, multiplies the output signal of said noise detector with

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said transfer function, and outputs a multiplied result to said control sound source as a control signal; and
a rectifying part provided in an upstream side of a fluid flowing within said duct for said noise detector and said error detectors and increasing a coherence of the fluid between said noise detectors and said error detectors.

Claim 18 (Withdrawn): An active noise control system comprising:

a plurality of noise detectors which are provided in a condition of being proximate to each other to detect noise within a duct;

an error detector which is provided in a condition of being proximate to each other in a downstream side of the noise propagating within said duct for said noise detector;

an adder which adds noise signals of said noise detectors;

a control sound source which is installed in the vicinity of said error detector to radiate a control sound having approximately the same sound pressure as of and an opposite phase to the noise within said duct;

an arithmetic circuit which inputs an output signal of said adder and an output signal of said error detector, sets a

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transfer function so that the output signal of said error detector becomes small, multiplies the output signal of said adder with said transfer function, and outputs a multiplied result to said control sound source as a control signal; and a rectifying part provided in an upstream side of a fluid flowing within said duct for said noise detectors and said error detectors and increasing a coherence of the fluid between said noise detectors and said error detectors.

Claim 19 (Withdrawn): An active noise control system according to claim 16, wherein said rectifying part includes a rectifying net and a rectifying grid which is composed of capillaries.

Claim 20 (Withdrawn): An active noise control system according to claim 16, wherein said rectifying part includes at least one rectifying net and a rectifying grid having an opening ratio greater than of said rectifying net.

Claim 21 (Withdrawn): An active noise control system according to claim 16, wherein a plurality of said rectifying nets are provided and placed in the upstream side and the

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downstream side of the fluid flowing within said duct for said rectifying grid, respectively.

Claim 22 (Withdrawn): An active noise control system according to claim 17, wherein said rectifying part includes a rectifying net and a rectifying grid which is composed of capillaries.

Claim 23 (Withdrawn): An active noise control system according to claim 17, wherein said rectifying part includes at least one rectifying net and a rectifying grid having an opening ratio greater than of said rectifying net.

Claim 24 (Withdrawn): An active noise control system according to claim 17, wherein a plurality of said rectifying nets are provided and placed in the upstream side and the downstream side of the fluid flowing within said duct for said rectifying grid, respectively.

Claim 25 (Withdrawn): An active noise control system according to claim 18, wherein said rectifying part includes a

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rectifying net and a rectifying grid which is composed of capillaries.

Claim 26 (Withdrawn): An active noise control system according to claim 18, wherein said rectifying part includes at least one rectifying net and a rectifying grid having an opening ratio greater than of said rectifying net.

Claim 27 (Withdrawn): An active noise control system according to claim 18, wherein a plurality of said rectifying nets are provided and placed in the upstream side and the downstream side of the fluid flowing within said duct for said rectifying grid, respectively.

Please add new claims 28-30 as follows:

Claim 28 (New): The active noise control system according to claim 1, wherein the opening ratio of said first rectifying net and the opening ratio of said second rectifying net are equal.

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Claim 29 (New): The active noise control system according to claim 1, wherein said first rectifying net and said second rectifying net have different opening ratios.

Claim 30 (New): The active noise control system according to claim 1, wherein said rectifying grid includes a plurality of capillaries.